UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/743,803	12/24/2003	Young Sin Lee	SI-0053	9801

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/743,803	LEE, YOUNG SIN
	Examiner	Art Unit	
	Ben H. Liu	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *24 December 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13 and 17* is/are rejected.

7)☒ Claim(s) *14-16* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some * c)☐ None of:

   1.☒ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claim 17 are objected because of the following informalities:

In claim 17, it appears the limitation "the first gatekeeper" in line 2 refers to "at least one

alternative gatekeeper for each sub-zone" in claim 7. If that is the case, it is suggested that the

applicant change the phrase to "the first alternative gatekeeper." Similar problem exists for the

limitation "the second gatekeeper" in line 8.

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1.   Determining the scope and contents of the prior art.
2.   Ascertaining the differences between the prior art and the claims at issue.
3.   Resolving the level of ordinary skill in the pertinent art.
4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

3.   Claims 1-4, 7-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennefeld et al. (U.S. Patent 6,519,249) in view of Galasso et al. (U.S. Patent 6,374,302).

For claims 1, 2, 7, and 8, Bennefeld et al. disclose a gatekeeper cluster comprising: one zone divided into at least two sub-zones in a communication system, and at least one alternative gatekeeper providing redundancy for each sub-zone wherein the alternative gatekeeper provides redundancy by one master gatekeeper and at least one standby gatekeeper, the master gatekeeper by itself operating as the gatekeeper of the sub-zone thereof (see column 9 lines 61-67).

For claim 3, Bennefeld et al. disclose a gatekeeper cluster, wherein the gatekeepers of each sub-zone have a zone routing table (see column 2 lines 63-67 and column 3 lines 13-15).

For claim 9, Bennefeld et al. disclose a gatekeeper cluster, wherein the redundancy of the alternative gatekeepers comprises: when the master gatekeeper receives an arbitrary request (xRQ) message from a terminal, searching an alternative type gatekeeper in a routing table, encoding the searched alternative type gatekeeper, transmitting an arbitrary confirm (xCF) message to the terminal, and setting up a call (see column 10 lines 28-34).

For claim 11, Bennefeld et al. disclose a gatekeeper cluster, wherein the heartbeat signaling includes: at the standby gatekeeper, searching an alternative type gatekeeper in a routing table to encode the searched alternative type gatekeeper and transmitting an arbitrary reject (xRJ) message to the requesting terminal; generating an arbitrary request (xRQ) message at the terminal receiving the arbitrary reject (xRJ) message, transmitting the generated arbitrary request (xRQ) message to the master gatekeeper, and requesting to set up a call; and generating an arbitrary confirm (xCF) message at the master gatekeeper receiving the arbitrary request (xRQ) message, transmitting the generated arbitrary confirm (xCF) message to the terminal, and setting up the call (see column 10 lines 28-44).

For claim 13, Bennefeld et al. disclose a gatekeeper cluster, wherein the heartbeat signaling further comprises, if there is no response, the standby gatekeeper being changed into the master gatekeeper, searching the alternative type gatekeeper in the routing table, encoding the searched alternative type gatekeeper, transmitting the arbitrary confirm (xCF) message to the terminal, and setting up the call (see column 10 lines 38-44).

For claims 1, 4, 7, 10, and 11, Bennefeld et al. discloses all the subject matter of the claimed invention with the following exceptions:

the gatekeeper cluster comprises at least one route providing redundancy for a pass between the sub-zones, wherein the redundancy provides a dispersion function based on a backup function as recited in claims 1 and 7;

Wherein the zone routing table determines to which zone a call is routed with reference to a telephone number of a callee, when there is no desired number in the zone managed by the gatekeeper as recited in claim 4;

The method of operating a gatekeeper cluster, wherein the redundancy of the alternative gatekeepers comprises, when the standby gatekeeper receives an arbitrary request (xRQ) message from a terminal, performing heartbeat signaling for master polling in order to check whether the master gatekeeper operates normally as recited in claim 10.

The method of operating a gatekeeper cluster, wherein the heartbeat signaling comprises:

At the standby gatekeeper, generating an information request (IRQ) message, transmitting the generated information request message to the master gatekeeper, and checking whether or not there is a response from the master gatekeeper as recited in claim 11.

Galasso et al. from the same or similar fields of endeavor discloses a master gatekeeper,

which uses a customer database to map telephone numbers to a zone gatekeeper (see column 5

lines 37-46). The master gatekeeper acts as a backup gatekeeper, which passes queries back and

forth with other gatekeepers so they remain synchronized with the current state of the network

(see column 4 lines 3-11 and column 7 lines 12-26). Thus, it would have been obvious to the

person of ordinary skill in the art at the time of the invention to use the master gatekeeper which

uses a customer database and acts as a backup gatekeeper that queries other gatekeepers for their

status as taught by Galasso et al. with the gatekeeper cluster as taught by Bennefeld et al. The

master gatekeepers as taught by Galasso et al. can be implemented by installing software with

instructions to store customer information and periodically query other gatekeepers in the

gatekeepers of the gatekeeper cluster as taught by Bennefeld et al. The motivation for using the

master gatekeepers at taught by Galasso et al. is to enable routing using customer identification

such as their telephone number and also provide efficient use of redundant gatekeepers.

4.   Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennefeld et al.

(U.S. Patent 6,519,249) and Galasso et al. (U.S. Patent 6,374,302) as applied to claim 7 above,

and further in view of Beyda (U.S. Patent Application Publication 2003/0035414).

For claim 17, Galasso et al. disclose a gatekeeper cluster wherein the redundancy of the

route comprises: when the first gatekeeper of the first sub-zone receives the arbitrary request

(xRQ) message from the caller terminal of the first sub-zone, checking whether or not a callee

number exists in the fist sub-zone; if the callee number does not exist in the first sub-zone, at the

first gatekeeper, transmitting the arbitrary request (xRQ) message to the second gatekeeper of

the second sub-zone with reference to the zone routing table; when the second gatekeeper is the

master gatekeeper, generating the arbitrary confirm (xCF) message, transmitting the generated

arbitrary confirm (xCF) message to the first gatekeeper, and authenticating the caller terminal

(see column 3 lines 52-67).

For claim 17, Galasso et al. discloses all the subject matter of the claimed invention with

the following exceptions: at the authenticated caller terminal, generating a set-up message and

transmitting the generated set-up message to the callee terminal of the second sub-zone through

the first gatekeeper; at the callee terminal, generating the arbitrary request (xRQ) message and

transmitting the generated arbitrary request (xRQ) message to the first gatekeeper through the

second gatekeeper; at the first gatekeeper, generating the arbitrary confirm (xCF) message

containing signaling information of the first gatekeeper and transmitting the generated arbitrary

confirm (xCF) message to the callee terminal through the second gatekeeper; at the callee

terminal, generating an alerting message and transmitting the generated alerting message to the

caller terminal through the second and first gatekeepers; at the callee terminal, generating a

connect message and transmitting the generated connect message to the caller terminal through

the second and first gatekeepers; and transceiving H.245 signaling between the callee terminal

and the second gatekeeper, between the second gatekeeper and the first gatekeeper and between

the first gatekeeper and the caller terminal to allow carrying on a conversation with each other.

Beyda from the same or similar fields of endeavor discloses a backup gatekeeper, which

establishes a call between two terminals across gatekeepers using H.245 control signaling (see

figure 1 and paragraph 27). Thus, it would have been obvious to the person of ordinary skill in

the art at the time of the invention to use the backup gatekeeper, which establishes a call between

two terminals across gatekeepers using H.245 control signaling as taught by Beyda with the

gatekeeper cluster with redundancy of the route as taught by Galasso et al. The backup

gatekeeper as taught by Beyda can be implemented by ensuring that the gatekeepers as taught by

Galasso et al. are compliant with the H.323 Recommendation and specifically H.245 control

signaling (see paragraph 19). The motivation for using the backup gatekeepers at taught by

Beyda is to enable the gatekeeper cluster taught by Galasso et al. to provide service for terminals

that use the widely deployed H.323 specification.

5.   Claims 5, 6, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennefeld et al. (U.S. Patent 6,519,249) and Galasso et al. (U.S. Patent 6,374,302) as applied to

claims 3 and 11, and further in view of Jones et al. (U.S. Patent 6,868,059).

        For claims 5 and 12, Bennefeld et al. disclose a gatekeeper cluster, wherein the zone

routing table contains a gatekeeper identifier used for authentication during signaling between

the sub-zones, a zone prefix representing a number schedule of each sub-zone, and a gatekeeper

type indicating any one of the alternative gatekeeper and the gatekeeper of a neighbor zone (see

column 2 lines 63-67 and column 3 lines 13-15).

        For claim 6, Bennefeld et al. disclose a gatekeeper cluster, wherein the gatekeeper

identifier is equally given to all the alternative gatekeepers within any one of the sub-zones (see

column 7 lines 66-67 and column 8 lines 1-3).

        For claims 5, 6, and 12, Bennefeld et al. disclose all the subject matter of the claimed

invention with the exception that the zone routing table contains a priority representing a priority

of the alternative gatekeepers. Jones et al. from the same or similar fields of endeavor teaches a

cluster of alternate gatekeepers which exchange signals among each other to ensure that the loads

of the gatekeepers remain well-balanced and reliable through redundancy (see column 2 lines 16-

20) and comprises a priority table which ranks alternate gatekeepers (see column 4 lines 43-45).

Thus, it would have been obvious to the person of ordinary skill in the art at the time of the

invention to use the cluster of alternate, redundant gatekeepers with well-balanced loads and a

priority table as taught by Jones et al. with the gatekeeper cluster as taught by Bennefeld et al.

As described by Jones et al., the alternate, redundant gatekeepers with well-balanced loads and a

priority table can be implemented using software on a general-purpose computer (see column 6

lines 16-21) in the cluster of gatekeepers as taught by Bennefeld et al. The motivation for using

the alternate, redundant gatekeepers with well-balanced loads and a priority table as taught by

Jones et al. is to provide more efficient and reliable services to terminals requesting a connection.

Allowable Subject Matter

6.   Claims 14-16 are objected to as being dependent upon a rejected base claim, but would

be allowable if rewritten in independent form including all of the limitations of the base claim

and any intervening claims.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure. Mortsolf et al. (U.S. Patent 6,229,804) and Korpi et al. (U.S. Patent 6,785,223) are

cited to show subject matter that is pertinent to the claimed inventions.
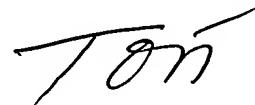
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ben H. Liu whose telephone number is (571) 270-3118. The examiner can normally be reached on Monday Through Friday 7:30AM to 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dang Ton can be reached on (571) 272-3171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BL

DANG T. TON
SUPERVISORY PATENT EXAMINER